

VZCZCXYZ0016
PP RUEHWEB

DE RUEHRL #1425/01 2001634
ZNR UUUUU ZZH
P 191634Z JUL 07
FM AMEMBASSY BERLIN
TO RUEHC/SECSTATE WASHDC PRIORITY 8838
INFO RUEHFR/AMEMBASSY PARIS PRIORITY 8911

UNCLAS BERLIN 001425

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STATE FOR OES AND EUR/AGS
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E.O. 12958: N/A

TAGS: [TSPA](#) [TSPL](#) [TNGD](#) [ETTC](#) [ECON](#) [GM](#)

SUBJECT: GERMANY'S AMBITION TO JOIN THE LUNAR-PROBING CLUB

REF: OSC EUP20070312086006

11. (SBU) Summary: Conversations with German officials concerning Germany's plan to launch an unmanned lunar mission by 2013 indicate that, although enthusiasm is high in the German Aerospace Center (DLR), the government needs to be convinced of the value of this unilateral mission. The chairman of the DLR executive Board discussed the planned lunar mission with NASA Deputy Administrator Shana Dale at the DLR Headquarters in Cologne, Germany, May 31. The DLR chairman said even though the goal is for Germany to launch the mission as a national project, in the end, the DLR may seek partners to help share the costs. In a separate meeting in Berlin, an official from the German Ministry of Economics and Technology told Embassy Global Affairs officer that the German Government -- and not the DLR -- will make the decisions concerning German lunar exploration. The Economics Ministry tasked the DLR to produce a feasibility study by autumn 2007. The DLR will present three options: send an orbiter to map the Moon, drop diagnostic/scientific equipment on the surface, or place a roving vehicle on the surface. The German Government will review the DLR feasibility study before making any decisions, probably in 2008. One decision could be to include foreign partners, such as NASA, if the government decides to share the costs. If the government approves a lunar mission, it will seek additional funding from parliament (the Bundestag) to cover the cost versus cutting other DLR programs to pay for it. End summary.

The DLR Pitch to NASA

12. (SBU) Global Affairs officer accompanied a NASA delegation headed by Deputy Administrator Shana Dale to meetings at the DLR Headquarters in Cologne May 31. During the discussions, Deputy Administrator Dale asked DLR Chairman of the Executive Board Johann-Dietrich Woerner about a DLR-hosted workshop on lunar exploration held in Dresden, Germany, in November 2006.

Woerner and other DLR officials elaborated on German ambitions to launch by 2013 an unmanned lunar mission, as announced in March 2007 (see ref). Their plan is to build a remote-sensing orbiter to fly 50 meters above the Moon's surface to map the topography, scan for minerals, analyze the gravitational field, and search for anomalies. The DLR officials said that, although the Moon has been visited and probed, very little is actually known about most of its surface and practically nothing about what is below the surface. They expect their mission to provide data necessary for future manned missions and even habitation. Nonetheless, they did not expect Germany to send any astronauts to the Moon.

13. (SBU) The DLR officials said their agency cannot pay for the lunar mission from its existing budget and would need

supplementary funding from parliament. Another option is to seek foreign partners, but Woerner emphasized that the DLR's preference is to undertake the mission as a national venture.

The DLR would seek outside help only if Germany could not produce all the necessary elements for the mission on its own. Potential cooperation with NASA might be in the use of laser communications. The DLR will consult with NASA on this as necessary. In the meantime, the DLR is preparing its feasibility study, due in September 2007, to analyze national capabilities and potential costs. The forecast is that a mission could cost 300-400 million euros and be launched by 2013. The government will review the feasibility study and make decisions in 2008. The DLR officials hope that parliament would provide the extra funding for the lunar mission instead of forcing the DLR to pay for it by cutting other programs.

14. (SBU) The DLR officials listed some of the technologies for the mission which Germany can produce on its own: robotics, laser communications, radar, hyperspectrography, gravity sensors, and stereo photography. As part of the feasibility study, the DLR is funding some studies among German industries for an orbiter and small landing vehicles.

The German Government May Have Different Ideas

15. (SBU) In a separate meeting in Berlin, Global Affairs officer talked to Wolfgang Schneider, of the German Ministry of Economics and Technology's Space Exploration: Programs and Applications Division, concerning the planned lunar mission. Schneider said that ultimately the decision will be political, based partly on economics -- the costs -- as well as science. Schneider also pointed out that the Ministry of Economics is the policy maker for space-related activities. The Ministry will present to the Cabinet its decisions resulting from the feasibility study. If the Cabinet approves the decisions, it will forward them to parliament for a vote.

16. (SBU) Schneider said each of the three options under study has a different projected cost. The first option of sending an orbiter to the Moon for remote sensing would provide the most substantial benefits for future lunar missions, but would also cost the most. As Schneider noted, only a small percentage of the Moon has been accurately mapped, so a comprehensive survey of the surface would assist future missions. In addition, remote sensing would provide information on the mineral content of the Moon's surface. The orbiter would carry optical equipment, radars, and hyperspectral scanners. A second, less expensive, option would be to drop equipment on the Moon. The equipment could be a radio telescope, which although an old idea is still useful, or a deep-digging probe. A radio telescope could be placed on the dark side of the Moon and thus be shielded from the Earth's radiation. A deep-digging probe could extend well below the surface to provide data on what is well beneath it. The third option, also less expensive than the first, would be to send some type of roving vehicle to the surface to conduct remote research.

17. (SBU) Schneider mentioned that, due to costs, Germany may decide to invite foreign partners, such as NASA, to join the mission. At a minimum, Germany would need to rely on a foreign partner for launch services, since it produces no large boosters. In answer to Emboff's question, Schneider said the Ariane rocket is capable of delivering a payload to the Moon, should Germany choose a European booster.

18. (SBU) Schneider ended with some cautionary notes. Even though the DLR is investigating the three options, this is no guarantee that the German Government will decide to pursue a unilateral mission, he said. Furthermore, even if the government decides to proceed with the mission, the parliamentary support for funding is not assured. Lastly, whatever enthusiasm may be generated in public and parliament for a German unmanned lunar mission probably will not

translate into German participation in a manned mission to the Moon, Scheider observed.

19. (U) This cable was coordinated with NASA subsequent to the delegation's departure.

TIMKEN JR